Opportunity to leverage Portugal's offshore potential: Horizon Europe 2023-24 Ocean energy calls

The draft 2023-24 Horizon Europe Work Programme contains 4 dedicated calls for ocean energy.

If preserved and adequately funded, these calls will be important opportunities to fund Portugal's objective of 30MW of wave energy by 2025 and 70MW by 2030.

Portugal has a huge wave energy resource and attracts the leading developers

Up to 50% of Portugal's electricity consumption could be met by its wave resource.[1] Europe's leading wave developers are locating in Portugal to harness this resource.

AW Energy

Deployed at 350kW device at Peniche and has plans to develop a 5MW project.

CorPower Ocean

Will shortly deploy a 300kW device at Agucadoura and already has EU Green Deal funding to deploy an additional 3 devices at the same location. CorPower Ocean is also developing a 10MW farm at Viana do Castelo.

Relevant calls: D3-1-23. Demonstration of sustainable tidal energy farms and **D3-1-26 Critical technologies for the future ocean energy farms** can fund these Portuguese wave farms.

Ocean energy will strengthen Portugal's energy security and strengthen its Blue Economy

Wave energy has a complementary production profile to wind. Deployment of both technologies will provide Portugal with a source of more stable indigenous renewable energy and will reduce the energy system's decarbonisation costs.

The Horizon Europe calls deliver on Portuguese national policy objectives

As well as the National Energy & Climate Plan deployment targets for wave, the Horizon Europe calls will help Portugal deliver upon:

- The National Strategy for the Sea 2021-2030 – to stimulate export and value added investment in wave energy
- The Roadmap for Carbon Neutrality 2050
- The Atlantic Action Plan 2.0 – to build a sustainable, resilient and competitive blue economy in Portugal
- Portugal Blue – a partnership between Instituição Financeira de Desenvolvimento and the European Investment Fund

Portugal must push for ambitious calls in the 23/24 Horizon Work Programme

To ensure that the 23/24 Work Programme supports Portugal's ocean energy leadership, it is essential to:

1. **Preserve** the 4 ocean energy calls in the final Work Programme

2. Ensure that all calls have **sufficient budget** to support 2 quality projects each

Call	Budget per project (€m)	Number of projects	Total call budget (€m)
D3-1-23. Demonstration of sustainable tidal energy farms	40	2	80
D3-1-25. Demonstration of sustainable wave energy farms	40	2	80
D3-1-24. Development of innovative power take-off and control systems	7	2	14
D3-1-26. Critical technologies for the future ocean energy farms	15	2	30
TOTAL			**204**

[1] Portugal has a technical wave potential of 25 TWh/year - WaveC, 2004, Potential and Strategy for the Development of Wave Energy in Portugal

This data is derived from the sector's Strategic Research & Innovation Agenda and a survey of the sector's needs. The funding requirement is in line with the SET Plan Ocean Energy Implementation Working Group's position.

WavEC Offshore Renewables

ETIP OCEAN European Technology & Innovation Platform for Ocean Energy

Power the Green Deal with blue energy

Ocean energy will deliver large volumes of the renewable energy that Europe needs

100GW
Capacity

10% of Europe's electricity consumption

Ocean energy can deliver 100 GW of capacity by 2050 – equivalent to 10% of Europe's electricity consumption today.

With almost 45% of Europe's citizens living in coastal regions, ocean energy can be readily delivered where it is needed.

Ocean energy will help deliver a prosperous transition

Ocean energy global market
€53bn / year
by 2050

Ocean energy will deliver economic recovery as well as decarbonisation. The European Commission estimates that ocean energy can contribute up to a cumulative €5.8bn in Gross Value Added between now and 2030[1]. Economic activity will take place across the continent – from industrial powerhouses with under-used supply chains to coastal regions with expertise in offshore operations and shipbuilding.

Ocean energy works in harmony with local communities

Operates in harmony with the environment

Ocean energy has a very low visual impact, preserving the aesthetic and touristic value of the environment. It also has a very limited environmental impact and in some cases can create new habitats or foraging areas for marine species.

EUROPEAN GREEN DEAL

Ocean energy complements other renewables and balances electricity systems

Ocean energy can play an important role in balancing Europe's electricity grid, which will high levels of variable renewable power.

Regulated by the moon, tidal stream is 100% predictable. The time between tides is so short that even a small amount of storage can deliver non-stop tidal power.

Wave works particularly well with wind – when the wind dies down, wave energy can step in to maintain power production. Combined, wind and wave together produce an overall power output that is smoother, and more reliable.

Driven by the moon
Tidal stream is
100% predictable
years in advance

Wave energy:
complements
variable renewables

Ocean energy sector is led by European companies

European companies lead the world in ocean energy. In tidal stream, the world's first offshore arrays are located in Europe, as is the world's largest array, and the world's largest turbine. In wave energy, Europe has the largest number of full-scale wave energy devices. Europe has a chance to consolidate this lead and dominate a new, high-value global market.

European companies
World leader in **tidal stream** and **wave energy**

Ocean energy will help deliver a just transition

Ocean energy can create 400,000 jobs by 2050. Many of these jobs will revitalise coastal communities that historically served shipbuilding, fishing and the oil & gas sector.

Ocean energy can create
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[1] 'The EU Blue Economy Report 2020' European Commission, 2020 - page 116